Introductory Statistics (Math 125) Fall 2013 Syllabus

1. Course Information

Course Title: Introductory Statistics - Math 125  
Section: AB on Monday at room 3184 and Wednesdays at room 3941 from 9:00 to 10:45 a.m.  
Credit Hours: 4 Credit Hours (for 16 weeks)  
Prerequisites: A grade of C or better in Math 99 (Intermediate Algebra)

2. Instructor Information

Name: Simon Aman, Ph.D. Office: Room 3824b e-mail: saman2@ccc.edu  
Phone: (773)907-4088 Cell:(773)790-8503(Urgent matters only)  
Office Hours: Mondays, Wednesdays 11:00 a.m. - 1:00 p.m. AND Tuesdays, Thursdays 9:00 - 10:30 a.m. Other times by appointment  
Advisement Hours: Tuesdays 8:00 - 9:00 a.m. AND Wednesdays 1:00 - 2:00 pm (By appointment only. Send an email)

3. Textbook and Course Materials

Elementary Statistics, Picturing the World, 5th e, Larson and Farber, Pearson/Prentice Hall. The use of textbook is optional. But the use of MyMathLab is required. The course ID is aman11664

The TI84 Plus calculator is highly recommended  
Websites: [www.mymathlab.com](http://www.mymathlab.com) you need to buy the access code.

4. Course Description

Introductory Statistics provides students with an opportunity to acquire a reasonable level of statistical literacy as it applies to a variety of societal issues. This course emphasizes interpretations and applications of techniques using descriptive and inferential statistics. Topics include: frequency distributions, histograms, and measures of central tendency, measures of dispersion, and measures of position, probability concepts, the binomial distribution, the normal distribution, the Central Limit Theorem, confidence intervals, hypothesis testing, and an introduction to correlation. The use of technology (e.g., graphing calculator, computer software, etc.) is an integral part of this course. Writing assignments, as appropriate to the discipline, are part of the course.

5. Important Dates

Monday September 2 - Labor Day (No Class)  
Wednesday October 23 - Midterm Exam  
Monday November 18 - Last day for student initiated withdrawal  
Wednesday December 11 - Final Exam

6. Grading Policies

Grading Scale(weighted):

<table>
<thead>
<tr>
<th>Midterm Exam</th>
<th>Final Exam</th>
<th>Homework</th>
<th>Quizzes</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
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A letter grade will be assigned based on the weighted average as follows:  
(90,100%) A; (80,89%) B; (70,79%) C; (60,69%) D; (0,59%) F;

7. Withdrawal Policies

The provisions of this syllabus are subject to change at the sole discretion of the instructor.
7.1. No-Show Withdrawal (NSW)
Students who do not attend the first day of class OR students who do not have access to MyMathLab by the beginning of the second week will be deleted from the class roster by the instructor and will be issued an NSW grade.

7.2. Administrative Withdrawal (ADW)
Students will be administratively withdrawn (ADW) at midterm if at least one of the following apply:

7.2.1. Less than 70% of assignments up to the midterm have been completed.
7.2.2. Less than 50% of quizzes and tests up to the midterm have been completed.
7.2.3. Less than 50% of class sessions up to the midterm have been attended.
7.2.4. Miss class for two consecutive weeks.

7.3. Withdrawal from the course (WTH)
Not attending classes does not constitute withdrawal from the course. After midterm, instructors can no longer drop students from the course. If students stop attending classes after the midterm, the instructor can only assign a grade of F. If you no longer attend classes, it is essential that you stop by at the registrar’s office and officially withdraw from the course to protect your GPA. The last day for student initiated withdrawal is Monday, April 8. Before withdrawing from the course, students are encouraged to consult the instructor.

8. Course Work

8.1. Attendance: Regular and active attendance is very important to succeed in this class. Attendance will be taken each class period. Each student is expected to arrive on time and attend the entire session. If you are absent or arrived late to class, it is your responsibility to find out all announcements, class work and content covered during your absence. Your attendance grade is based on your presence for the entire class session and active individual and/or group participation.

8.2. Homework: In mathematics, doing homework is an essential part of the learning process; do not expect to succeed this course without keeping up with the homework assignments. There will be graded online homework assignments on each section of the text covered in this class. You will get immediate feedback on each problem, and incorrectly worked problems can be repeated (with a new version of the problem provided after 3 attempts) until a correct solution is obtained. Homework may be done at any location with an Internet access. Do not wait till the last hour to start and complete homework assignments because a computer glitch may prevent you from accessing your account. Any homework assignment done after the due date will incur a loss of 3%. All homework assignments are due the next class meeting following the lecture that discussed the topics covered in the homework.

8.3. Quizzes: Timed online or in-class quizzes will be given at the end of each chapter.

8.4. Group Project: There will be one ongoing group project. Each group will have a maximum of four members. The detailed instructions will be posted online.

8.5. Cell Phones: Cell phones are not allowed to be used during test. You may use your cell phone calculator or an app during class, but talking on the phone during class time is NOT allowed. You will have to step out if you must pick up your cell phone.

8.6. Good learning environment: Please treat the instructor, other students, and their opinions with respect. Before arriving to class, please turn off all cell phones, pagers, and other loud devices. Please make every effort to arrive on time for class.

8.7. Academic Integrity and Student Policy Manual: The City Colleges of Chicago has no tolerance for violations of academic integrity. Plagiarism and cheating of any kind are serious violations of these standards and could result, minimally, in the grade of F. Please refer to the student policy manual at http://www.ccc.edu/departments/Documents/studentpolicymanual.pdf.

9. Academic Support Services

9.1. Math Center: Room 1220B
9.2. Tutoring Center: http://www.ccc.edu/colleges/truman/departments/Pages/Tutoring.aspx

9.3. TRIO Student Support Services: TRIO programs are funded by the U.S. Department of Education to help low-income, disabled or first-generation college students achieve a college education. http://ccc.edu/departments/Pages/TriO-Student-Success-Programs.aspx


9.5. Wellness Center: The Truman College Wellness Center provides mental health and other social services to support your personal well-being and academic success. http://ccc.edu/colleges/truman/departments/Pages/Wellness-Center.aspx

9.6. Student clubs, groups and organizations: http://ccc.edu/colleges/truman/services/Pages/Clubs-Groups-Organizations.aspx

10. More about Math 125

10.1. Students the Course is Expected to Serve: This course is intended for students who are liberal arts majors and require a general education mathematics course for their undergraduate degree or for students whose programs require introductory statistics.

10.2. Course Objectives:

10.2.1. Develop statistical reasoning as it relates to contextual (real-world) scenarios.

10.2.2. Apply statistical techniques to data from various representations.

10.2.3. Interpret statistical results appropriately (verbally and in writing).

10.2.4. Use technology to perform statistical computations and explore statistical concepts.

10.3. Student Learning Outcomes: Upon satisfactory completion of the course, students will be able to:

10.3.1. Construct a frequency distribution from raw data.

10.3.2. Interpret data presented in tabular form and graphical form (e.g., histogram, stem-and-leaf plot, box-and-whisker, scatterplots, etc.).

10.3.3. Demonstrate knowledge and appropriate use of statistical terms such as: population, sample, variable, and data classifications (i.e, qualitative data, quantitative data, discrete data, etc.).

10.3.4. Identify sampling techniques (random versus non-random).

10.3.5. Interpret information using the measures of central tendency from a contextual-based (real-world) scenario.

10.3.6. Interpret information using the measures of variation (dispersion) from a contextual-based (real-world) scenario.

10.3.7. Compute and interpret the correlation coefficient for small data sets.

10.3.8. Apply the Empirical Rule and Chebyshev’s Theorem to a contextual-based (real-world) scenario.

10.3.9. Interpret information using the measures of position from a contextual-based (real-world) scenario.

10.3.10. Demonstrate knowledge of terms related to probability such as: experiment, outcome, sample space, event, empirical (experimental) probability, and classical (theoretical) probability.

10.3.11. Apply the rules of probability to a contextual (real-world) situation.

10.3.12. Construct a probability distribution for a discrete random variable.

10.3.13. Compute the mean (expected value) and variance of a discrete probability distribution.


10.3.15. Demonstrate knowledge of the properties of a normal and a standard normal distribution.

10.3.16. Compute an area under the normal curve.

10.3.17. Apply the normal distribution and Central Limit Theorem to a contextual (real-world) situation.
10.3.18. Demonstrate knowledge of terms related to interval estimation such as: point estimate, confidence level, confidence interval, and margin of error.

10.3.19. Compute a confidence interval (for small and large samples) or minimum sample size needed for the population mean and population proportion.

10.3.20. Demonstrate knowledge of terms related to hypothesis testing (e.g., null and alternative hypotheses, significance level, etc.).

10.3.21. Perform a hypothesis test (for small and large sample sizes) of the population mean and population proportion.

10.3.22. Communicate effectively in both written and oral formats.

10.3.23. Demonstrate the ability to think critically, abstractly, and logically.

10.3.24. Work with a variety of technologies.